# Chapter 01

**Financial Accounting** :- focus on external users and GAAP rules .

GAAP ➔ generally accepted accounting principles

**Managerial Accounting** :- focus on internal users and is not necessarily GAAP-driven. Also provides data for financial accounting . This includes :

- Cost Accounting
- Management Accounting

## Differences between Financial and Managerial Accounting

| | Managerial | Financial |
|---|---|---|
| Purpose | Help Managers Make Decisions | Communicate Financial Position |
| Primary Users | Internal Managers | External Stakeholders |
| Focus | Future-Oriented | Past-Oriented |
| Rules | Cost-benefit | GAAP |
| Time Span | Varies | Annual/Quarter |

Both managerial accounting and financial accounting don't deal with many of the same economic events.

## Manufacturing Costs:-

Manufacturing costs are usually grouped into three main categories: direct materials, direct labor, and manufacturing overhead. These costs are incurred to make a product.

## Costs can also be classified as period costs or product costs

**Product costs** include all the costs that are involved in acquiring or making a product. More specifically, it includes direct materials, direct labor, and manufacturing overhead. Product costs are also known as inventoriable costs. all manufacturing costs are treated as product costs.

**Period costs** include all selling costs and administrative costs. These costs were incurred in the period. All selling and administrative costs are typically considered to be period costs.

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Two more cost categories are often used in discussions of manufacturing costs prime cost and conversion cost.

Prime cost is the sum of direct materials cost and direct labor cost.

Conversion cost is the sum of direct labor cost and manufacturing overhead cost.

The term conversion cost is used to describe direct labor and manufacturing overhead because these costs are incurred to convert materials into the finished product.

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Merchandising companies purchase finished goods from suppliers for resale to customers.

Manufacturing companies purchase raw materials from suppliers and produce and sell finished goods to customers.

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Merchandising companies calculate the cost of goods sold as Beginning Merchandise Inventory plus ( + ) Purchases minus ( - ) Ending Merchandise Inventory.

Manufacturing companies calculate the cost of goods sold as the Beginning Finished Goods Inventory plus ( + ) the Cost of Goods Manufactured minus( - ) Ending Finished Goods Inventory.

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<u>differences between variable costs and fixed costs.</u>

**Total variable costs** change when activity changes.

**Total fixed costs** remain unchanged when activity changes.

| Cost | In Total | Per Unite |
|---|---|---|
| variable | Total variable cost changes as activity level changes. | Variable cost per unit remains the same over wide ranges of activity |
| fixed | Total fixed cost remains the same even when the activity level changes | The average fixed cost per unit goes down as the activity level goes up |

differences between direct and indirect costs.

1. **Direct costs** are costs that can be easily and conveniently traced to a specified cost object. Examples of direct costs are direct material and direct labor.
2. **Indirect costs** are costs that cannot be easily and conveniently traced to a specified cost object. An example of an indirect cost is manufacturing overhead.

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It is important to realize that every decision involves a choice between at least two alternatives.

The goal of making decisions is to identify those costs that are either relevant or irrelevant to the decision.

Costs and benefits that differ between alternatives are relevant in a decision.

All other costs and benefits are irrelevant and can and should be ignored.

To make decisions, it is essential to have a grasp of three concepts: differential costs, opportunity costs, and sunk costs.

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Sunk costs have already been incurred and cannot be changed now or in the future. They should be ignored when making decisions.

A sunk cost is a cost that has already been incurred and that cannot be changed by any decision made now or in the future. Since sunk costs cannot be changed and therefore cannot be differential costs, they should be ignored in decision-making.

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|---|
| Direct Material = Beg Inventory + Purchase – End Inventory |
| Manufacturing Cost = Direct Material + Direct labor + Manufacturing Overhead |
| Cost Of Goods Manufactured = Beg Work In Process + Total Manufacturing Cost - End Work In Process |
| Cost Of Goods Sold = Beg Finished Goods+ Cost of Goods Manufactured - End Finished Goods |
| Gross Profit = Sales Revenue – Cost of Goods Sold |
| Net Profit = Gross Profit – Period Cost |

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|---|
| Period Cost = Selling Exp + Administrative Cost |
| Prime cost = Direct Materials + Direct Labor |
| Conversion Cost = Direct labor + Manufacturing Overhead |

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## True or False:

1. Fixed costs per unit vary with the level of activity.
2. Product costs include all selling and administrative costs.
3. A relevant cost is a cost that differs between alternatives.
4. Direct labor is a product cost.
5. Depreciation is a sunk cost.
6. Period costs include all selling and administrative costs.
7. Advertising on T.V. consider a product cost.
8. Both managerial accounting and financial accounting deal with the same economic events.
9. The costs that have already been incurred and cannot be changed are known as sunk costs.
10. Total variable costs are constant within the relevant range.
11. Wood used in the production of furniture is fixed cost.
12. Fixed costs are costs that remain the same per unit.
13. Telephone expense is a variable cost.
14. Depreciation is a sunk cost
15. If product costs exceed sales, it will be gain
16. Indirect costs benefit one product.
17. A production cost report is an external report
18. When 10,000 units are produced the fixed cost per unit was 50 L.E. therefore when 20,000 units are produced the fixed cost per unit will be 50.
19. Variable cost increases as production goes down.
20. All Manufacturing Costs Are variable.
21. Aggregate of direct cost is known as Prime cost.
22. Cost can be direct cost and fixed cost at the same time.

# Chapter 02

## Types of Product Costing Systems: -

### Process Costing: -

**A process costing system is best used by companies that produce many units of a single product. Because the units of output are identical, the company will probably use an average cost system to determine product cost.**

**The identical nature of each unit of the product enables assigning the same average cost per unit.**

### Job-order Costing: -

**A Job-Order Costing Many different products are produced each period. Products are manufactured to order. The unique nature of each order requires tracing or allocating costs to each job and maintaining cost records for each job.**

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## Comparing Process and Job-Order Costing

| | Job-Order | Process |
|---|---|---|
| Number of jobs worked | Many | Single Product |
| Cost accumulated by | Job | Department |
| Average cost computed by | Job | Department |

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## Manufacturing Overhead: -

**The rate is calculated by dividing the total estimated manufacturing overhead for the coming period by the estimated total units of the**

allocation base. If our allocation base is machine hours, we would estimate the total number of machine hours used in production in the coming period.

The predetermined overhead rate (*POHR*) used to apply overhead to jobs is determined before the period begins.

$$\text{POHR} = \frac{\text{Estimated total manufacturing overhead cost for the coming period}}{\text{Estimated total units in the allocation base for the coming period}}$$

Using a predetermined rate makes it possible to estimate total job costs sooner.

Actual overhead for the period is not known until the end of the period

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We calculate the predetermined overhead rate before the period begins. As we work on a particular job, we apply overhead by multiplying the predetermined rate times the actual level of activity. If overhead is applied based on machine hours, we would apply overhead by multiplying the predetermined rate times the actual number of machine hours used on a particular job.

$$\text{Overhead} = \text{Applied POHR} \times \text{Actual activity}$$

POHR: - Based on *estimates*, and determined before the period begins.

Actual activity: - Actual allocation amount based upon the actual activity level.

## Compute under-applied or over-applied overhead cost:

**Underapplied overhead** exists when the amount of overhead applied to jobs during the period using the predetermined overhead rate is less than the total amount of overhead actually incurred during the period.

**Overapplied overhead** exists when the amount of overhead applied to jobs during the period using the predetermined overhead rate is greater than the total amount of overhead actually incurred during the period.

| | |
|---|---|
| overapplied overhead | Net operating income will increase |
| Underapplied overhead | Net operating income will decrease |

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## The Predetermined Overhead Rate & Capacity: -

Criticisms can be overcome by using estimated total units in the allocation base at capacity in the predetermined overhead rate calculation denominator.

$$\text{Capacity Method} = \frac{\text{Estimated total manufacturing overhead cost for the coming period}}{\text{full capacity}}$$

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When capacity is used in the denominator of the predetermined rate, what happens to the predetermined overhead rate as the estimated activity *decreases?*

The predetermined overhead rate stays the same; it is not affected by changes in activity.

When estimated activity is used in the denominator of the predetermined rate, what happens to the predetermined overhead rate as the estimated activity decreases?

The predetermined overhead rate goes up when activity goes down.

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$$\text{AOHR} = \frac{\text{Actual total manufacturing overhead cost for the period}}{\text{Actual total units in the period}}$$

# Chapter 03

## Relevant Costs for Decision Makin

Making decisions is one of the basic functions of a manager. To be successful in decision-making, managers must be able to tell the difference between relevant and irrelevant data and must be able to correctly use the relevant data in analyzing alternatives.

**A relevant cost** is a cost that differs between alternatives.

## Relevant Cost Analysis: A Two-Step Process

**Step 1** Eliminate costs and benefits that do not differ between alternatives.

**Step 2** is to use the remaining costs and benefits that differ between alternatives in making the decision. The costs that remain are the differential, or avoidable, costs.

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## Total and Differential Cost Approaches

The total approach requires constructing two contribution format income statements – one for each alternative.

We can efficiently analyze the decision by looking at the different costs and revenues and arrive at the same solution.

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## Adding/Dropping Segments

One of the most important decisions managers make is whether to add or drop a business segment, such as a product or a store.

DECISION RULE

should drop the segment only if its profitability increases. This would only happen if the fixed cost savings exceeded the lost contribution margin.

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## Prepare a make-or-buy analysis.

if the total avoidable costs are less than the cost of buying the part, thereby suggesting should continue to make the part.

if the total avoidable costs are greater than the cost of buying the part, thereby suggesting should buy the part.

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## Prepare an analysis showing whether a special order should be accepted.

A special order is a one-time order that is not considered part of the company's normal ongoing business.

When analyzing a special order, only the incremental costs and benefits are relevant. Since the existing fixed manufacturing overhead costs would not be affected by the order, they are not relevant.

If the special order is, the incremental revenue will exceed the incremental costs should accept the order. that this answer assumes that fixed costs are unavoidable and that variable marketing costs must be incurred on the special order.

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## Determine the most profitable use of a constrained resource and the value of obtaining more of the constrained resource.

### Key Terms and Concepts

When a limited resource of some type restricts the company's ability to satisfy demand, the company is said to have a constraint.

The machine or process that is limiting overall output is called the bottleneck – it is the constraint.

### Utilization of a Constrained Resource

Fixed costs are usually unaffected in these situations, so the product mix that maximizes the company's total contribution margin should ordinarily be selected.

A company should not necessarily promote those products that have the highest unit contribution margin.

the total contribution margin will be maximized by promoting those products or accepting those orders that provide the highest contribution margin in relation to the constraining resource.

# Chapter 04A

## Basics of Cost-Volume-Profit Analysis

The contribution Margin (CM) is the amount remaining from sales revenue after variable expenses have been deducted.

CM is used first to cover fixed expenses. Any remaining CM contributes to net operating income.

Total CM = Sales Revenue – Variable Cost

Cm per Unit = selling Price – variable Cost per unit

$$CM\% = \frac{CM}{\text{Selling Price}}$$

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## Break-Even Analysis

Break-even analysis can be approached in two ways:

1. Equation method

Profits = (Sales – Variable expenses) – Fixed expenses

Sales = Variable expenses + Fixed expenses + Profits

At the break-even point profits equal zero

2. Contribution margin method

$$\text{Break-even point in units sold} = \frac{\text{Fixed Cost}}{\text{CM}}$$

$$\text{Break-even point in total sales dollars} = \frac{\text{Fixed Cost}}{\text{CM \%}}$$

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## Determine the level of sales needed to achieve a desired target profit.

### The CVP Equation Method

$$\text{Sales} = \text{Variable expenses} + \text{Fixed expenses} + \text{Profits}$$

### The Contribution Margin Approach

$$\text{Unit sales to attain the target profit} = \frac{\text{Target Profit} + \text{Fixed Cost}}{\text{CM}}$$

$$\text{sales to attain the target profit} = \frac{\text{Target Profit} + \text{Fixed Cost}}{\text{CM \%}}$$

## Compute the margin of safety and explain its significance.

**The margin of safety** is the excess of budgeted (or actual) sales over the break-even volume of sales.

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|---|
| margin of safety per Unit= unit Sold - Break-even point in units sold |
| margin of safety per L.E= Sales - Break-even point in L.E |

# Chapter 5

## Sales budget موازنة المبيعات

Sales ( المبيعات ) = Expected Volume In unit ( عدد الوحدات المتوقع بيعها ) × Unit Selling Price ( سعر بيع الوحده )

## Production budget موازنة الانتاج

Total Needs ( أجمالى الاحتياجات ) = Expected Volume In unit ( عدد الوحدات المتوقع بيعها) + Ending Finished Goods Unit (عدد الوحدات الموجودة أخر الفترة ) .

Production ( الانتاج ) = Total Needs ( أجمالى الاحتياجات ) – Beginning Finished Goods Unit (عدد الوحدات الموجودة أول الفترة ) .

## Direct Material budget موازنة المواد الخام

Direct materials during the period ( المواد الخام خلال الفترة ) = Production (الانتاج) × Direct Material Ber Unit ( المواد الخام للوحدة الواحدة)

Total Needs ( أجمالى الاحتياجات ) = Direct materials during the period ( المواد الخام خلال الفترة) + Ending Direct Material ( المواد الخام أخر الفترة )

Direct materials ( المواد الخام ) = Total Needs ( أجمالى الاحتياجات ) - Beginning Direct Material ( المواد الخام أول الفترة )

Cost Of Direct Material ( تكلفة المواد الخام ) = Direct materials ( المواد الخام ) × cost per kilo ( سعر الوحدة من المادة الخام)

## Direct Labor budget موازنة الاجور

Production Time ( وقت الانتاج )= Production (الانتاج) × Direct Labor Time Ber Unit ( الوقت المستغرق فى الوحدة الواحدة) .

Cost Of Direct Labor ( تكلفة الاجور ) = Production Time ( وقت الانتاج ) × Direct Labor Ber Hour ( معدل أجر الساعة ) .

## Budget income statement موازنة قائمة الدخل

Cost Of Goods Sold ( تكلفة الوحدات المباعة) = Expected Volume In unit ( عدد الوحدات المتوقع بيعها) × Total Unit Cost ( أجمالى تكلفة الوحدة)

Gross Profit ( مجمل الربح ) = Sales ( المبيعات ) – Cost Of Goods Sold ( تكلفة الوحدات المباعة).

Period Cost ( تكاليف الفترة ) = Selling EXP ( مصاريف بيع) + Administrative EXP ( مصاريف أدارية)

Net Profit ( مجمل الربح ) = Gross Profit ( مجمل الربح ) - Period Cost ( تكاليف الفترة )

**The master budget** consists of several separate but interdependent budgets.

**The sales budget** shows the expected sales for the budget period expressed in dollars and units. It is usually based on a company's sales forecast. All other parts of the master budget are dependent on the sales budget.

**The production budget** is prepared after the sales budget. It lists the number of units that must be produced during each budget period to meet sales needs and to provide for the desired ending inventory.

The production budget in turn directly influences the direct materials, direct labor, and manufacturing overhead budgets, which in turn enable the preparation of the ending finished goods inventory budget.